

What is claimed is:

1. An outdoor unit of a satellite television ground system comprising:
- 5 converter circuitry operative to receive a first satellite television signal and to block downconvert the first satellite television signal;
- coarse tuning circuitry in communication with said converter circuitry and operative to coarse tune the first block downconverted satellite television signal; and
- 10 oscillator circuitry in communication with said converter circuitry and said coarse tuning circuitry, and operative to generate and provide an oscillator signal to said converter circuitry for block downconverting the first satellite television signal, and to generate and provide the oscillator signal to said coarse tuning circuitry for coarse tuning the first downconverted satellite television signal.
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2. The outdoor unit of claim 1, wherein said oscillator circuitry comprises a frequency locked oscillator.
3. The outdoor unit of claim 1, wherein said coarse tuning circuitry
- 20 comprises:
- a first frequency synthesizer in communication with said oscillator circuitry and operative to generate a first synthesized signal;
- a first signal combiner in communication with said first frequency synthesizer and said converter circuitry, said first signal combiner operative to
- 25 receive said first block downconverted signal from said converter circuitry and said first synthesized signal from said first frequency synthesizer, and to produce a first combined signal; and
- a filter in communication with said first signal combiner and operative to receive said first combined signal and pass a first coarse tuned signal therefrom.
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4. The outdoor unit of claim 1, wherein said converter circuitry is operative to separately receive and block downconvert first and second satellite television

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signals, and said coarse tuning circuitry is operative to separately coarse tune the first and second satellite television signals.

- 5 5. The outdoor unit of claim 4, wherein said coarse tuning circuitry comprises:

a first frequency synthesizer in communication with said oscillator circuitry and operative to generate a first synthesized signal;

- 10 a first signal combiner in communication with said first frequency synthesizer and said converter circuitry, said first signal combiner operative to receive said first block downconverted signal from said converter circuitry and said first synthesized signal from said first frequency synthesizer, and to produce a first combined signal;

a filter in communication with said first signal combiner and operative to receive said first combined signal pass a first coarse tuned signal therefrom;

- 15 a second frequency synthesizer in communication with said oscillator circuitry and operative to generate a second synthesized signal;

- a second signal combiner in communication with said second frequency synthesizer and said converter circuitry, said second signal combiner operative to receive said second block downconverted signal from said converter circuitry and said second synthesized signal from said second frequency synthesizer, and to produce a second combined signal; and
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a second filter in communication with said second signal combiner and operative to receive said second combined signal and pass a second coarse tuned signal therefrom.

6. An outdoor unit for a satellite television ground system comprising:
means for receiving and block downconverting a first satellite television
signal;

5 means, in communication with said means for receiving and block
downconverting a first satellite television signal, for coarse tuning said first block
downconverted satellite television signal; and

10 means for generating and providing an oscillator signal to said means for
block downconverting a first satellite television signal for block downconverting
the first satellite television signal and for generating and providing the oscillator
signal to said means for coarse tuning said first block downconverted satellite
television signal for coarse tuning the first downconverted satellite television
signal.

15 7. The outdoor unit of claim 6, wherein said means for generating and
providing an oscillator signal comprises means for generating and providing a
frequency locked oscillator signal.

8. The outdoor unit of claim 6, wherein said means for coarse tuning said
first block downconverted satellite television signal comprises:

20 means, in communication with said means for generating and providing an
oscillator signal, for generating a first frequency synthesized signal from said
oscillator signal;

25 means, in communication with said means for generating a first frequency
synthesized signal and said means for block down converting a first satellite
television signal, for combining said first frequency synthesized signal with said
first block downconverted satellite television signal, and to produce a first
combined signal therefrom; and

means, in communication with said means for combining, for filtering a
coarse tuned signal from said combined signal.

9. The outdoor unit of claim 6, further comprising:

means for receiving and block downconverting a second satellite television signal; and

5 means, in communication with said means for receiving and block downconverting a second satellite television signal, for coarse tuning said second block downconverted satellite television signal; and

10 wherein said means for generating and providing an oscillator signal includes means for generating and providing the oscillator signal to said means for block downconverting a second satellite television signal for block downconverting the second satellite television signal, and for generating and providing the oscillator signal to said means for coarse tuning said second block downconverted satellite television signal for coarse tuning the second downconverted satellite television signal.

15 10. The outdoor unit of claim 9, wherein said means for coarse tuning comprises:

means, in communication with said means for generating and providing an oscillator signal, for generating a first frequency synthesized signal from said oscillator signal;

20 means, in communication with said means for generating a first frequency synthesized signal and said means for downconverting, for combining said first synthesized signal with said first block downconverted satellite television signal, and to produce a first combined signal therefrom;

25 means, in communication with said means for combining, for filtering a first coarse tuned signal from said first combined signal;

means, in communication with said means for generating and providing an oscillator signal, for generating a second frequency synthesized signal from said oscillator signal;

30 means, in communication with said means for generating a second frequency synthesized signal and said means for downconverting, for combining said second synthesized signal with said second block downconverted satellite television signal, and to produce a second combined signal therefrom; and

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means, in communication with said means for combining, for filtering a second coarse tuned signal from said second combined signal.

11. In an outdoor unit of a satellite television ground system, a method of
5 processing a satellite television signal comprising the steps of:

receiving a first satellite television signal;
block downconverting the first satellite television signal;
coarse tuning the first block downconverted satellite television signal;
generating an oscillator signal; and

- 10 utilizing the oscillator for block downconverting and coarse tuning the first satellite television signal.

12. The method of claim 11, wherein:

- the step of block downconverting the first satellite television signal
15 includes the steps of:

generating a frequency multiplier signal;
combining the frequency multiplier signal with the first satellite
television signal; and

- filtering the combined signal to obtain the block downconverted
20 satellite television signal; and

the step of coarse tuning the first block downconverted satellite television
signal includes the steps of:

generating a frequency synthesizer signal;
combining the frequency synthesizer signal with the block

- 25 downconverted satellite television signal; and

filtering the combined signal to obtain the coarse tuned satellite
television signal.

13. The method of claim 11, further comprising the steps of:

30 receiving a second satellite television signal;
block downconverting the second satellite television signal;

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coarse tuning the second block downconverted satellite television signal;
and

utilizing the oscillator for block downconverting and coarse tuning the
second satellite television signal.

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14. The method of claim 13, further comprising the steps of:

receiving control signals from an indoor unit of the satellite television
ground system; and

utilizing the received control signals to control the block downconverting
10 and coarse tuning of the first and second satellite television signals.

15. The method of claim 11, wherein the step of generating an oscillator signal
includes the steps of:

receiving a master oscillator signal from an indoor unit of the satellite
15 ground system; and

utilizing the master oscillator signal to generate the oscillator signal.

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